



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve

Nebraska Public Employees Retirement System

January 1, 2014 Actuarial Valuation Results

Presentation to the Public Employees Retirement Board

April 21, 2014





Discussion Topics

- January 1, 2014 Valuation Results
 - Equal Retirement Benefit Funds
 - State
 - County
 - Cash Balance Benefit Fund
 - State
 - County

- Projection Results

- Questions



Purposes of an Actuarial Valuation

- Measure assets and liabilities
- Determine actuarial contribution rates and funding requirements for plan year ending December 31, 2014
- Analyze experience (actual vs. expected) in last year
- Report on trends in assets, liabilities and contributions



Changes Since Last Valuation

- Cavanaugh Macdonald now responsible for actuarial services
 - Replicated January 1, 2013 valuations
 - Quantifies any differences in valuation methodology and provides basis for comparison of 2014 results

- No change in benefit provisions, actuarial assumptions or actuarial methods



EQUAL RETIREMENT BENEFIT FUND VALUATIONS



Equal Retirement Benefit (ERB) Valuation

- Members who participated in the State or County Defined Contribution Plan prior to 1/1/1984 (whether in the Cash Balance or DC Plan now)
- Eligible for a benefit from ERB if they elect an annuity payable over their lifetime
- Benefit is equal to the difference in the benefit paid using male only conversion factors and unisex conversion factors
 - Only applies to balances based on contributions before January 1, 1984



State Equal Retirement Benefit

(\$ in thousands)

	1/1/2014	1/1/2013
Members		
Cash Balance	378	678
Defined Contribution	<u>495</u>	<u>820</u>
Total	1,332	1,498
Pre-1984 Account Balance		
Cash Balance	\$ 34,272	\$ 28,702
Defined Contribution	<u>21,622</u>	<u>31,901</u>
Total	\$ 55,894	\$ 60,603
Projected Benefit Cost	\$ 780	\$ 899
Actuarial Value of Assets	580	496
Unfunded Liability/(Reserve)	\$ 200	\$ 403
Contribution Alternatives		
Full Contribution	\$ 200	\$ 403
20-Year Amortization Payment from January 1, 1999	\$ 48	\$ 83



County Equal Retirement Benefit

(\$ in thousands)

	1/1/2014	1/1/2013
Members		
Cash Balance	167	139
Defined Contribution	<u>126</u>	<u>182</u>
Total	293	321
Pre-1984 Account Balance		
Cash Balance	\$ 5,305	\$ 4,247
Defined Contribution	<u>3,881</u>	<u>5,550</u>
Total	\$ 9,186	\$ 9,797
Projected Benefit Cost	\$ 127	\$ 146
Actuarial Value of Assets	367	315
Unfunded Liability/(Reserve)	\$ (240)	\$ (169)
Contribution Alternatives*		
Full Contribution	\$ 0.0	\$ 0.0

*Sum of contribution requirements for only those counties with an unfunded liability. No counties have an unfunded liability as of January 1, 2014.



CASH BALANCE BENEFIT FUNDS



Cash Balance Benefits

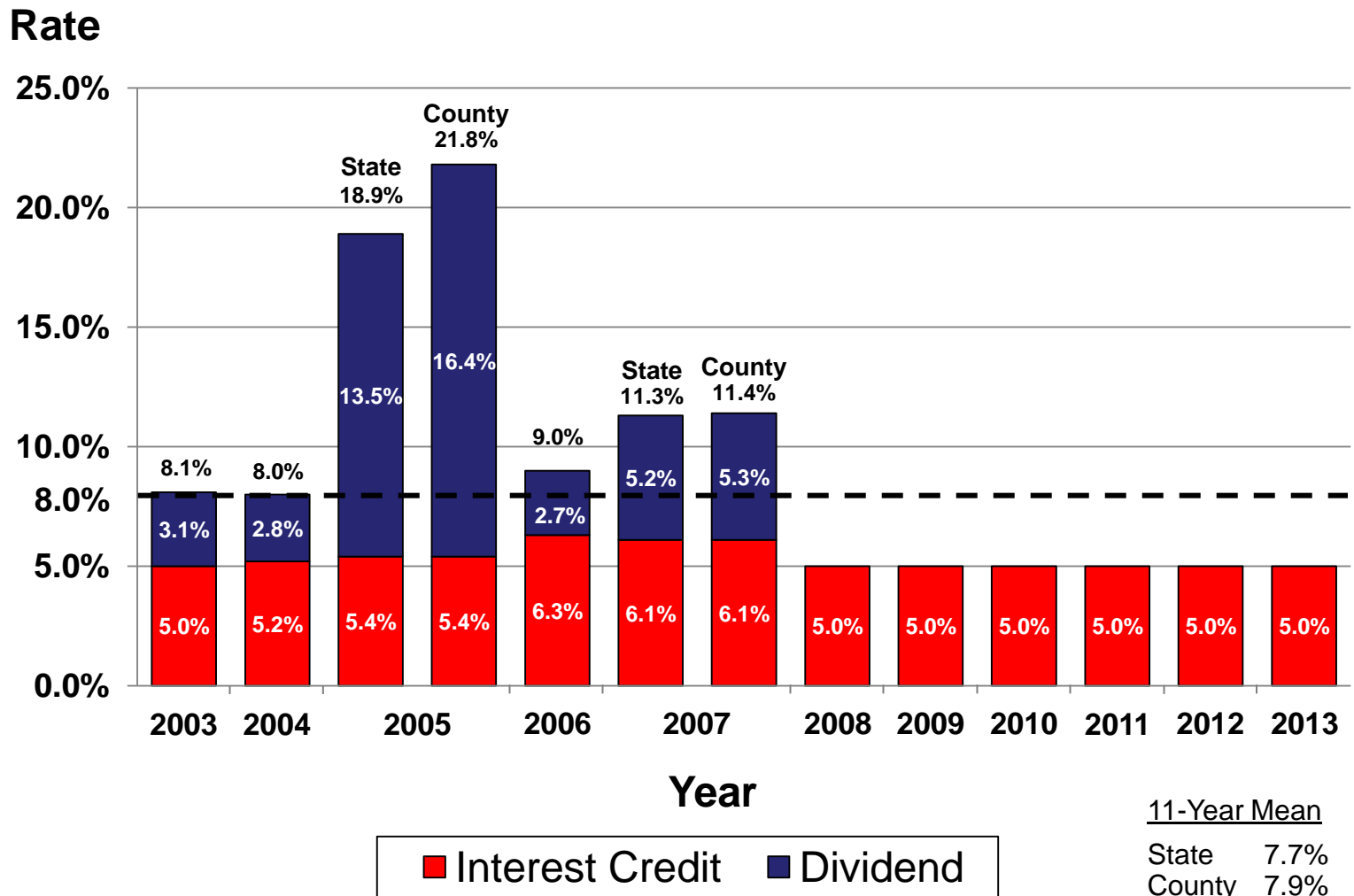
- Cash Balance is *like* Defined Contribution
 - Each member has an individual cash balance account
 - Account is credited with contributions
 - State: 4.8% member, 156% State match
 - County: 4.5% member, 150% County match
 - County Law Enforcement Personnel contribute additional 1% or 2% with 100% County match
 - Accounts are credited with interest
 - Federal Mid-term rate plus 1.5%, minimum of 5% annual rate
 - Annual Crediting Rate for 2013 was 5.00% (assumption crediting rate is 6.75%)
 - Members elect lump sum distribution or annuity payments at termination/retirement

Cash Balance Benefits (cont.)

➤ Cash Balance IS Defined Benefit

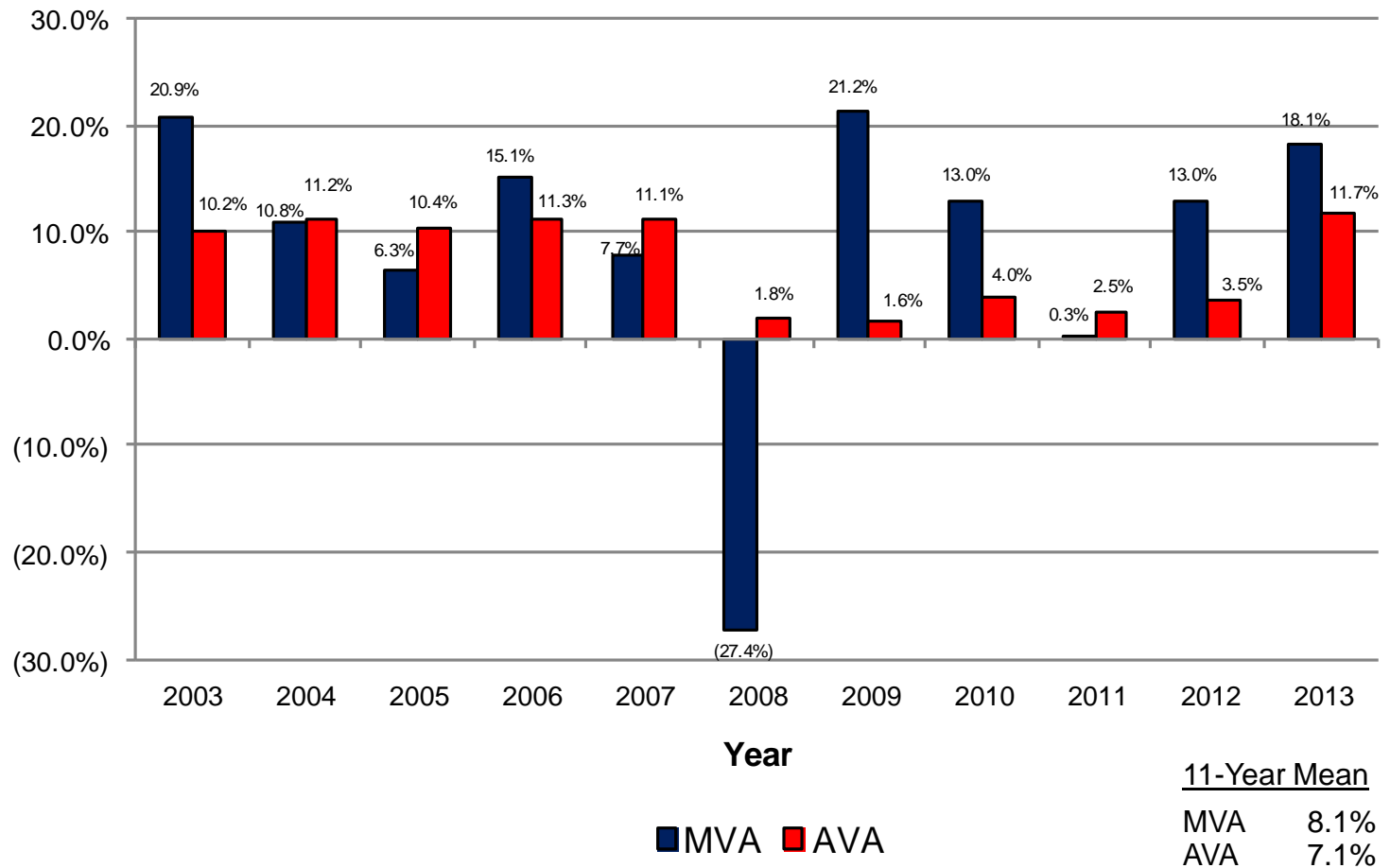
- Interest credit is guaranteed on individual account balances
- Account balances are not necessarily equal to Assets held
- State assumes risk of paying guaranteed interest
 - State pays additional contributions if significant losses occur
- Benefit improvements possible if significant gains occur
 - By State Law, improvements limited to 90% of statutory contribution rate
 - Board Policy to grant dividend only if minimum of 100% funded ratio on both Funded and Current Value Basis, both before and after the dividend is granted
 - Dividend plus annual interest credit during the year cannot exceed 8.0% unless a majority of the PERB agrees
- Plan cost is determined actuarially, but actual contributions are fixed in statute

History of Interest Credits and Dividends





History of Investment Return





Membership Statistics - State

	January 1, 2014	January 1, 2013	% Change
1. Number			
• Active	12,536	11,956	4.9%
• Inactive	5,003	4,569	9.5%
• Retired and Beneficiaries	<u>1,052</u>	<u>910</u>	15.6%
• Total	18,591	17,435	6.6%
2. Projected Annual Salaries	\$ 535,526,147	\$ 500,493,490	7.0%
3. Active Averages			
• Age	45.6	46.1	(1.1%)
• Service	9.7	9.9	(2.0%)
• Entry Age	35.9	36.2	(0.8%)
• Compensation	\$ 42,719	\$ 41,861	2.0%
4. Annual Benefit Payments	\$ 16,795,086	\$ 13,971,207	20.2%



System Assets - State

(\$ in millions)

	Market Value	Actuarial Value
Net Assets, December 31, 2012	\$ 1,033.41	\$ 1,009.41
- Employer and Member Contributions	+ 64.26	+ 64.26
- Benefit Payments	- 64.84	- 64.84
- Net Investment Income	+ 190.86	+ 121.37
Net Assets, December 31, 2013	\$ 1,223.69	\$ 1,130.20
Estimated Rate of Return	18.1%	11.7%

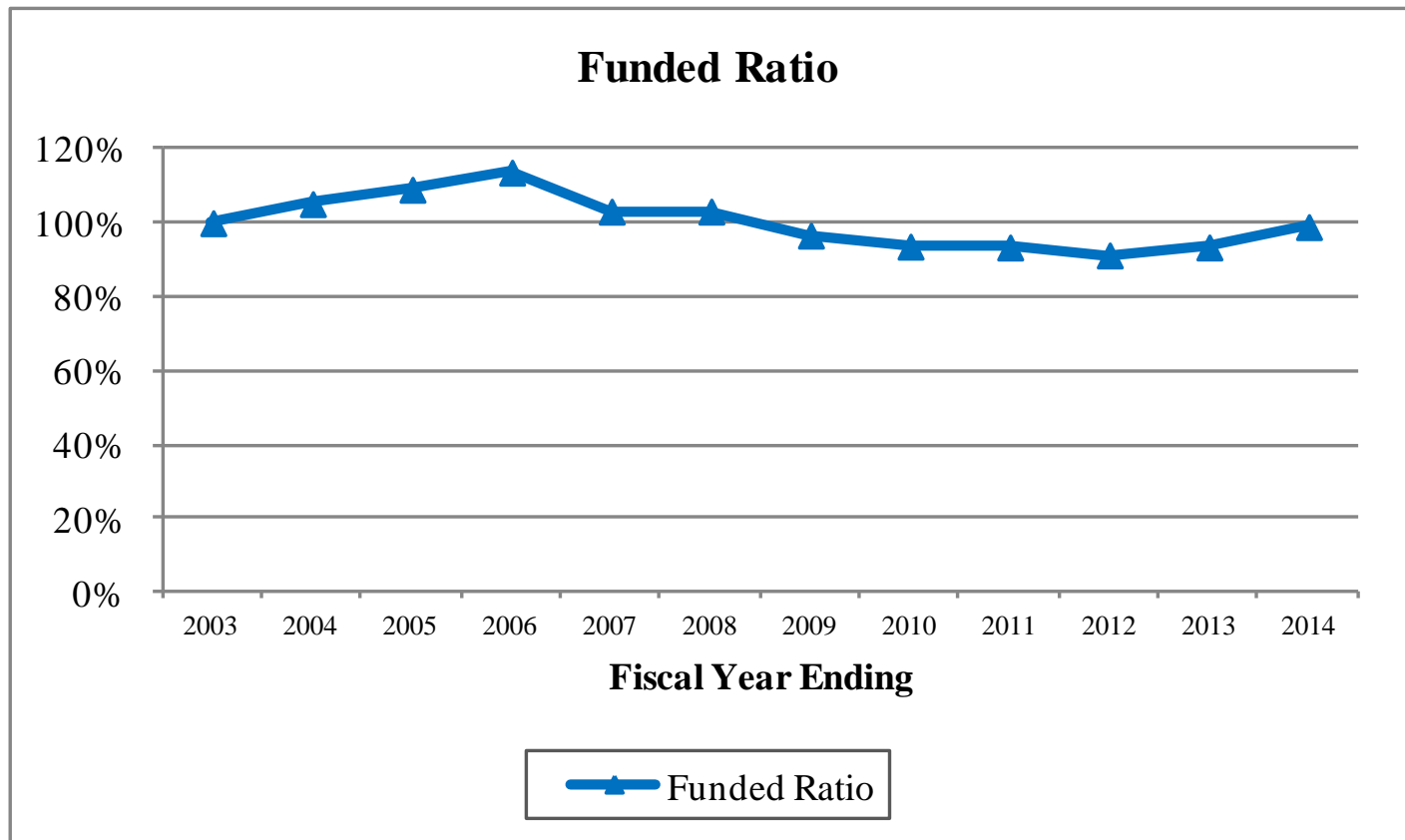


Funded Ratios - State

(\$ in millions)

	State	
	January 1, 2014	January 1, 2013
<u>Funding Basis</u>		
1. Actuarial Accrued Liability	\$ 1,139.8	\$ 1,078.0
2. Actuarial Value of Assets	\$ 1,130.2	\$ 1,009.4
3. Funded Ratio (2 ÷ 1d)	99%	94%
<u>Current Value Basis</u>		
1. Accumulated Benefit Value	\$ 1,151.4	\$ 1,095.0
2. Market Value of Assets	\$ 1,223.7	\$ 1,033.4
3. Funded Ratio (2 ÷ 1d)	106%	94%

Historical Funded Ratio – State





Change in UAL - State

(\$ in millions)

	(\$ Millions)
Unfunded Actuarial Accrued Liability, January 1, 2013	\$68.5
- Expected decrease from amortization method	(1.2)
- Actual versus required contributions	(5.0)
- Investment experience	(39.5)
- Liability experience	(16.1)
- Other experience	(2.4)
- Changes identified in replication process	5.3
Unfunded Actuarial Accrued Liability, January 1, 2014	\$9.6

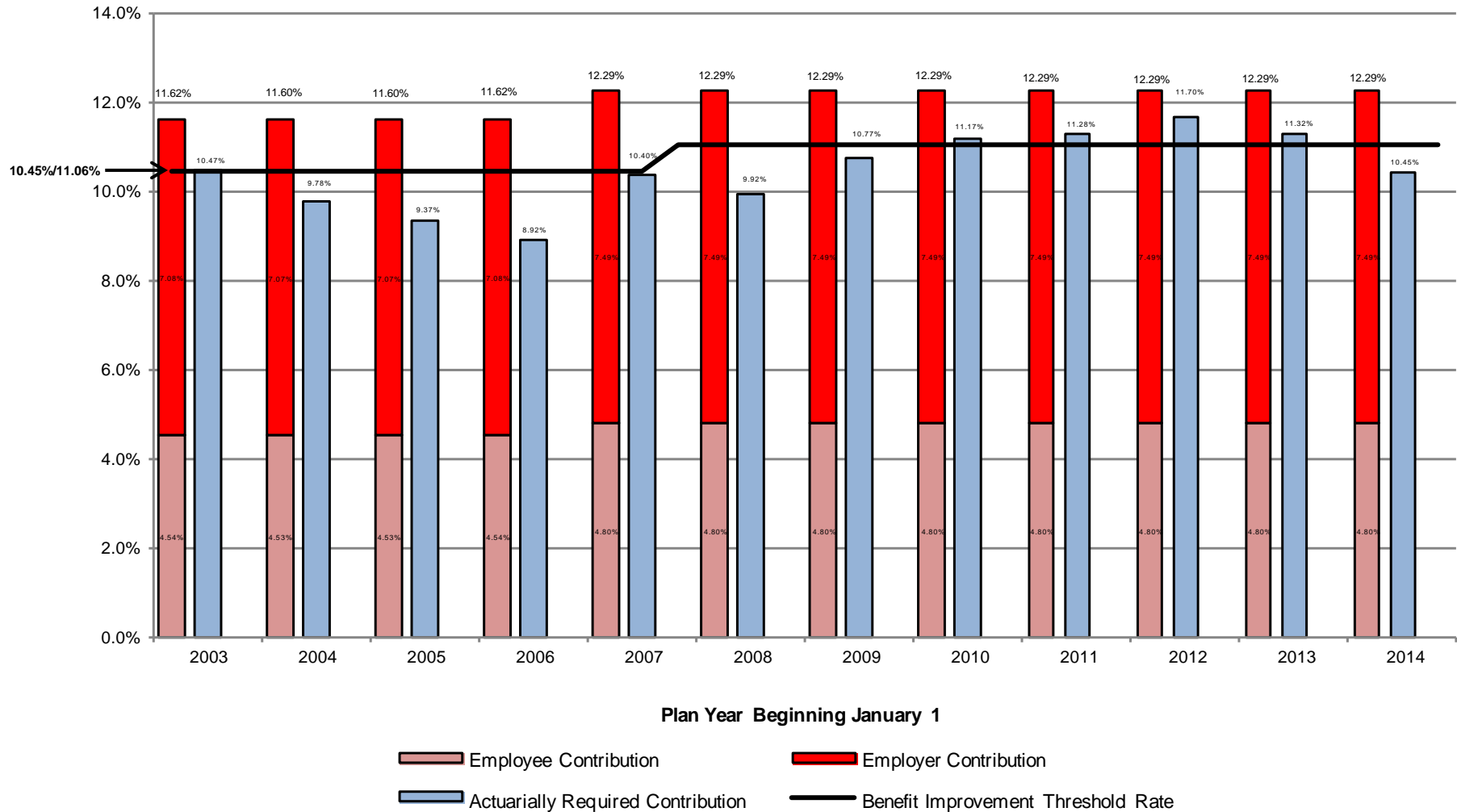


Contribution Rates - State

	State	
	January 1, 2014	January 1, 2013
Annual Actuarial Contribution		
- Normal Cost	10.22%	10.06%
- Amortization of Unfunded Actuarial Accrued Liability	<u>0.23%</u>	<u>1.26%</u>
- Total Contribution	10.45%	11.32%
Statutory Contribution Rate		
- Employee	4.80%	4.80%
- Employer	<u>7.49%</u>	<u>7.49%</u>
- Total	12.29%	12.29%
Additional State Contribution Required	0.00%	0.00%
Shortfall/(Margin)	(1.84%)	(0.97%)



Historical Contribution Rates - State





Membership Statistics - County

	January 1, 2014	January 1, 2013	% Change
1. Number			
• Active	6,228	6,034	3.2%
• Inactive	1,963	1,787	9.8%
• Retired and Beneficiaries	<u>384</u>	<u>350</u>	9.7%
• Total	8,575	8,171	4.9%
2. Projected Annual Salaries	\$ 206,510,678	\$ 202,786,048	1.8%
3. Active Averages			
• Age	48.6	48.6	0.0%
• Service	9.0	8.6	4.7%
• Entry Age	39.6	40.0	(1.3%)
• Compensation	\$ 33,158	\$ 33,607	(1.3%)
4. Annual Benefit Payments	\$ 3,247,934	\$ 2,875,656	12.9%



System Assets - County

(\$ in millions)

	Market Value	Actuarial Value
Net Assets, December 31, 2012	\$ 287.67	\$ 281.26
- Employer and Member Contributions	+ 24.06	+ 24.06
- Transfers	+ 0.97	+ 0.97
- Benefit Payments	- 15.70	- 15.70
- Net Investment Income	+ 53.56	+ 33.29
	\$ 350.56	\$ 323.88
Net Assets, December 31, 2013		
	18.3%	11.6%
Estimated Rate of Return		

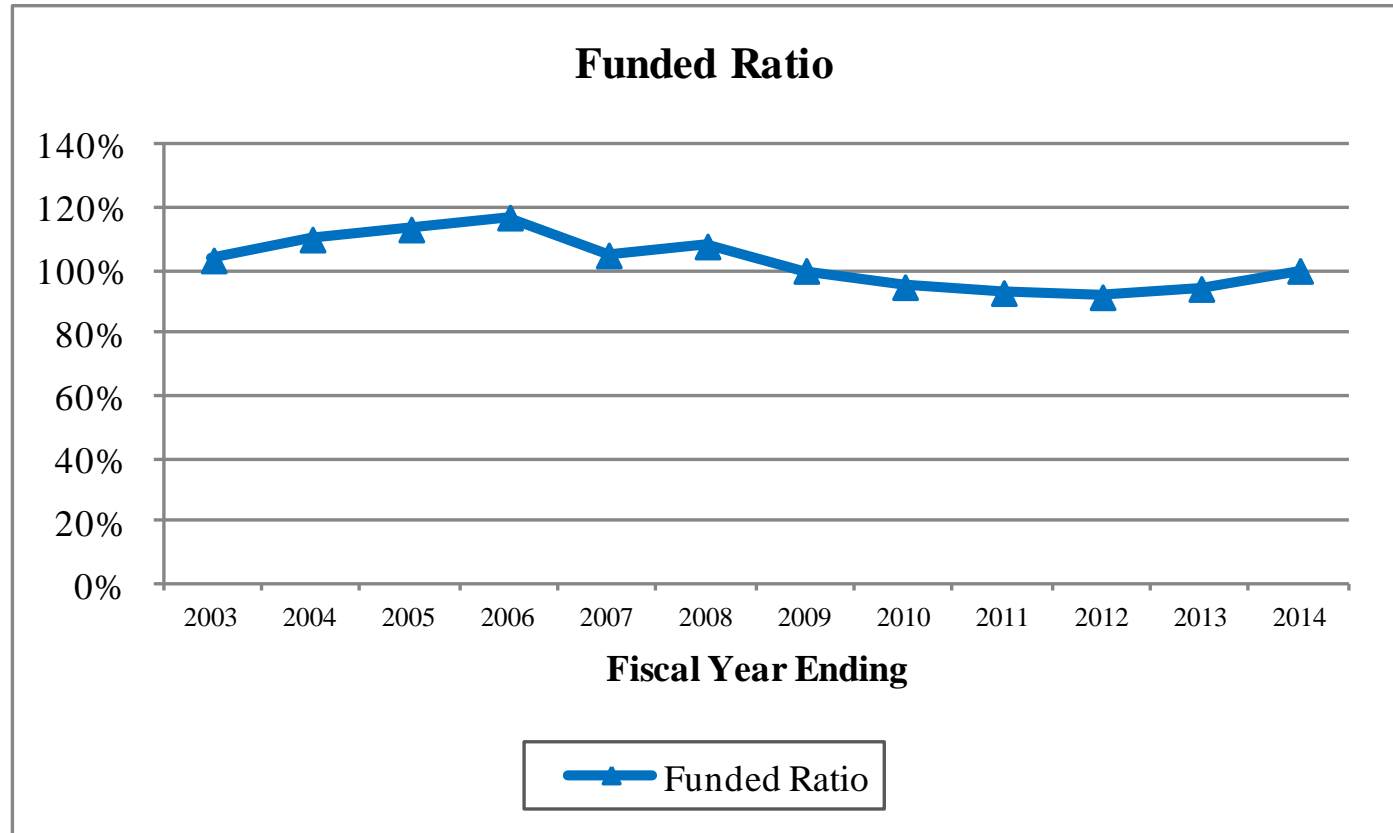


Funded Ratios - County

(\$ in millions)

	County	
	January 1, 2014	January 1, 2013
<u>Funding Basis</u>		
1. Actuarial Accrued Liability	\$ 323.0	\$ 297.6
2. Actuarial Value of Assets	\$ 323.9	\$ 281.3
3. Funded Ratio (2 ÷ 1d)	100.3%	95%
<u>Current Value Basis</u>		
1. Accumulated Benefit Value	\$ 330.4	\$ 307.1
2. Market Value of Assets	\$ 350.6	\$ 287.7
3. Funded Ratio (2 ÷ 1d)	106%	94%

Historical Funded Ratio – County





Change in UAL - County

(\$ in millions)

	(\$ Millions)
Unfunded Actuarial Accrued Liability, January 1, 2013	\$16.3
- Expected decrease from amortization method	(0.3)
- Actual versus required contributions	(2.6)
- Investment experience	(11.1)
- Liability experience	(3.7)
- Other experience	(0.5)
- Changes identified in replication process	1.0
Unfunded Actuarial Accrued Liability, January 1, 2014	(\$0.9)



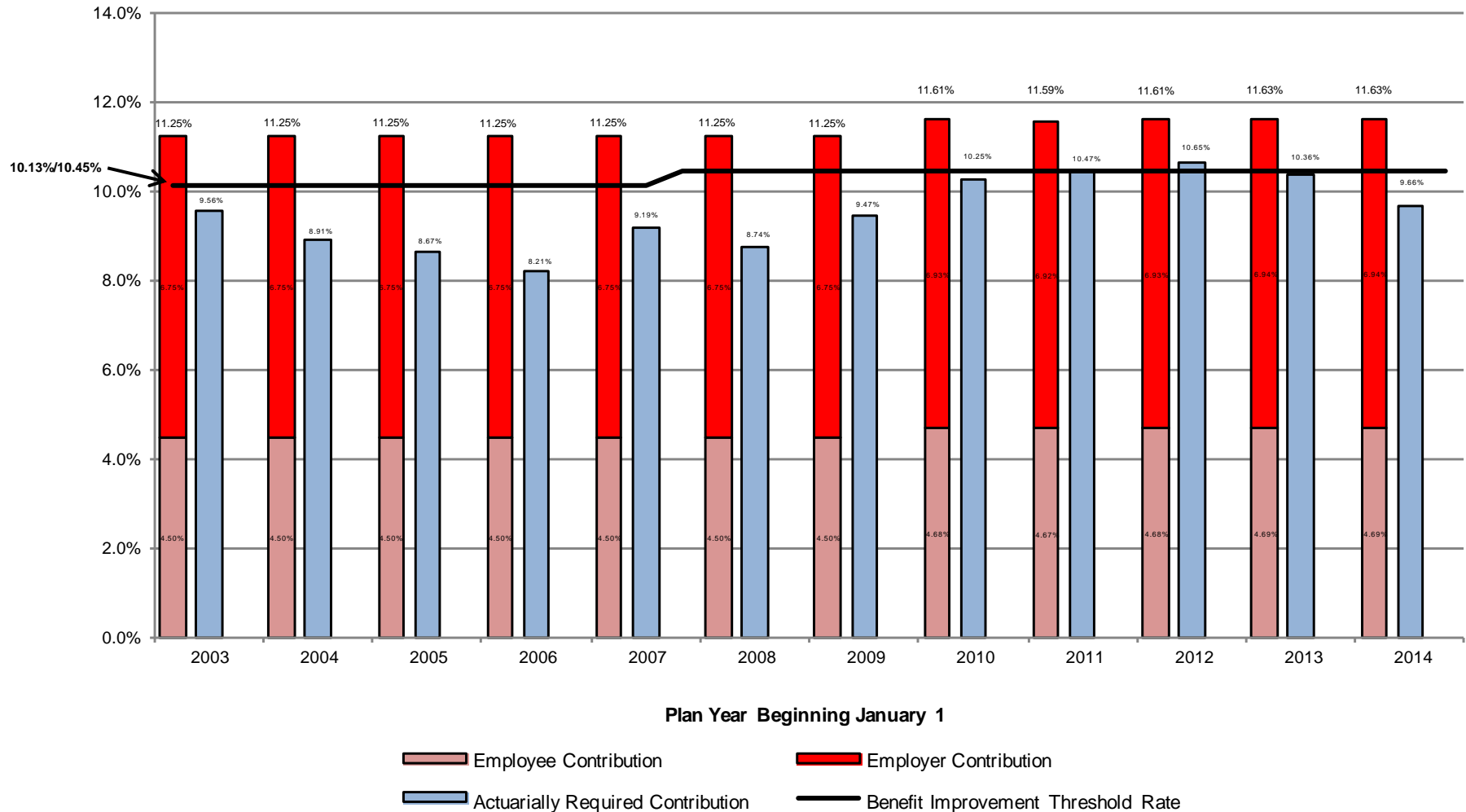
Contribution Rates - County

	County	
	January 1, 2014	January 1, 2013
Annual Actuarial Contribution		
- Normal Cost	9.70%	9.62%
- Amortization of Unfunded Actuarial Accrued Liability	<u>(0.04%)</u>	<u>0.74%</u>
- Total Contribution	9.66%	10.36%
Statutory Contribution Rate		
- Employee	4.69%	4.69%
- Employer	<u>6.94%</u>	<u>6.94%</u>
- Total	11.63%	11.63%
Additional State Contribution Required	0.00%	0.00%
Shortfall/(Margin)	(1.97%)	(1.27%)

Note: Statutory Contribution Rate is a blend of regular and law enforcement members



Historical Contribution Rates - County





Contribution Rate Available For Benefit Improvements

	January 1, 2014	
	State	County
1. Total Statutory Contribution Rate	12.29%	11.63%
2. 90% Benefit Improvement Threshold Rate	11.06%	10.47%
3. Actuarially Required Contribution Rate	10.45%	9.66%
4. Unfunded Actuarial Accrued Liability	\$9,569,498	\$ (887,857)
5. Excess Available for Benefit Improvements		
a. Rate of Pay	0.00%	0.81%
b. Annual Amount	\$ 0	\$1,672,736
6. Funded Ratios		
a. Funding Basis	99.2%	100.3%
b. Current Basis	106.3%	106.1%

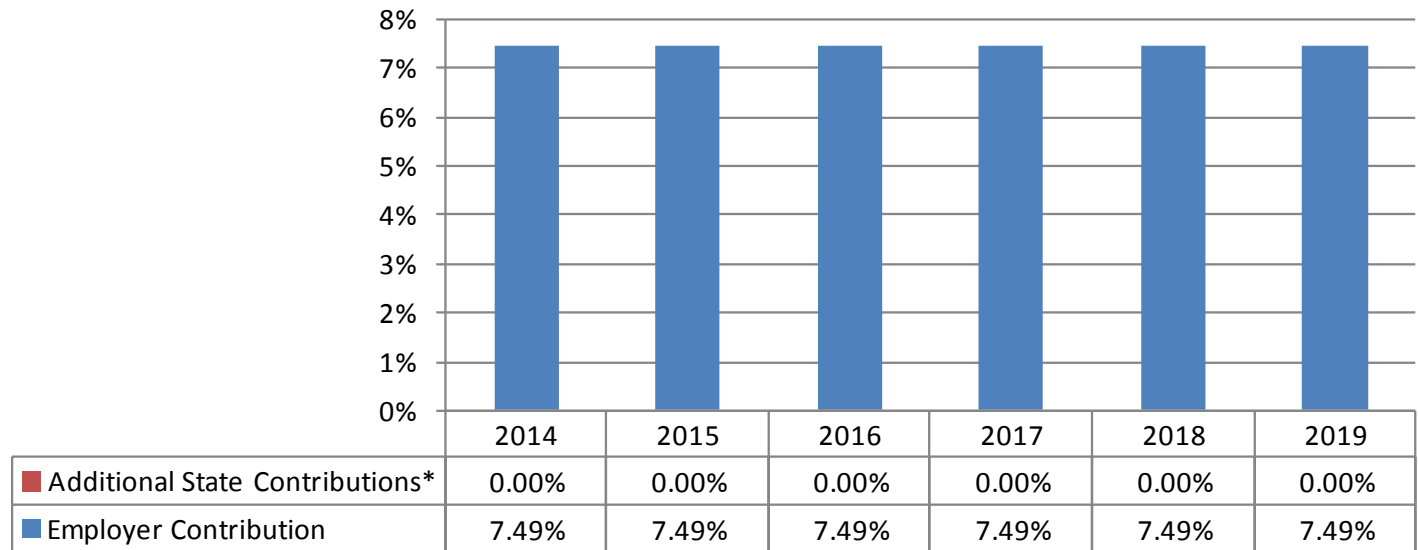
Note: County Plan meets the Board's criteria to grant a dividend. Maximum dividend is 0.29% of account balances. Statutory Contribution Rate is a blend of regular and law enforcement members



FIVE YEAR PROJECTIONS OF EXPECTED STATE AND COUNTY FUNDING RESULTS



Projected Contribution Rates - State

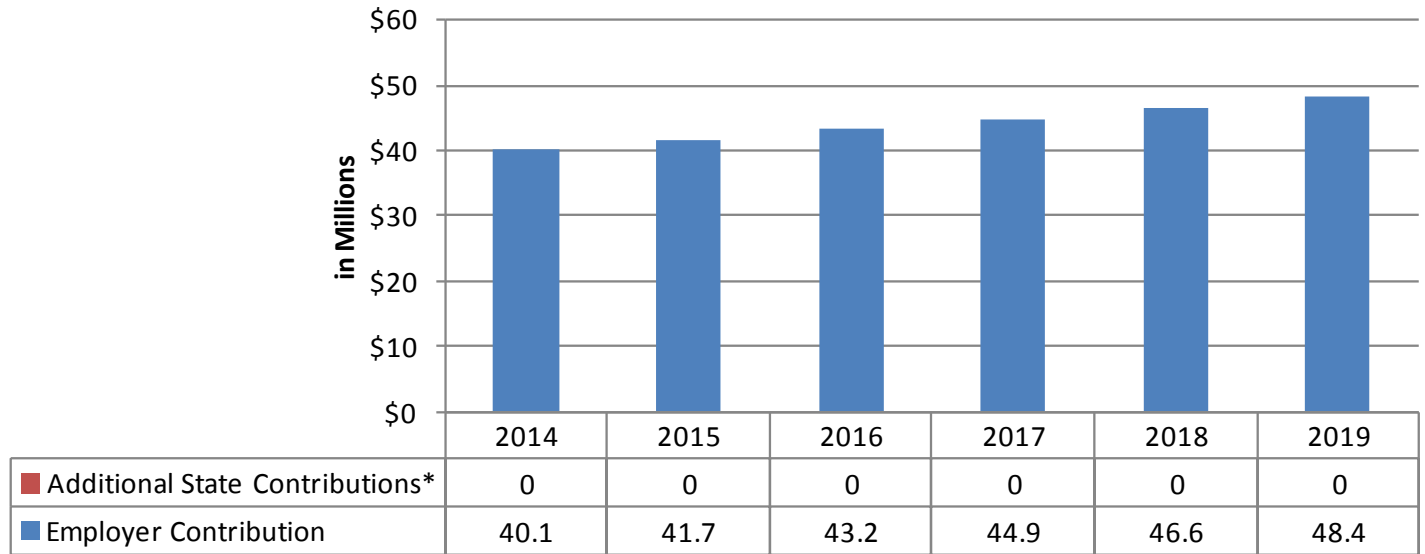


* Paid July 1 of the following year

Plan Year Beginning January1



Projected Contribution Amounts - State

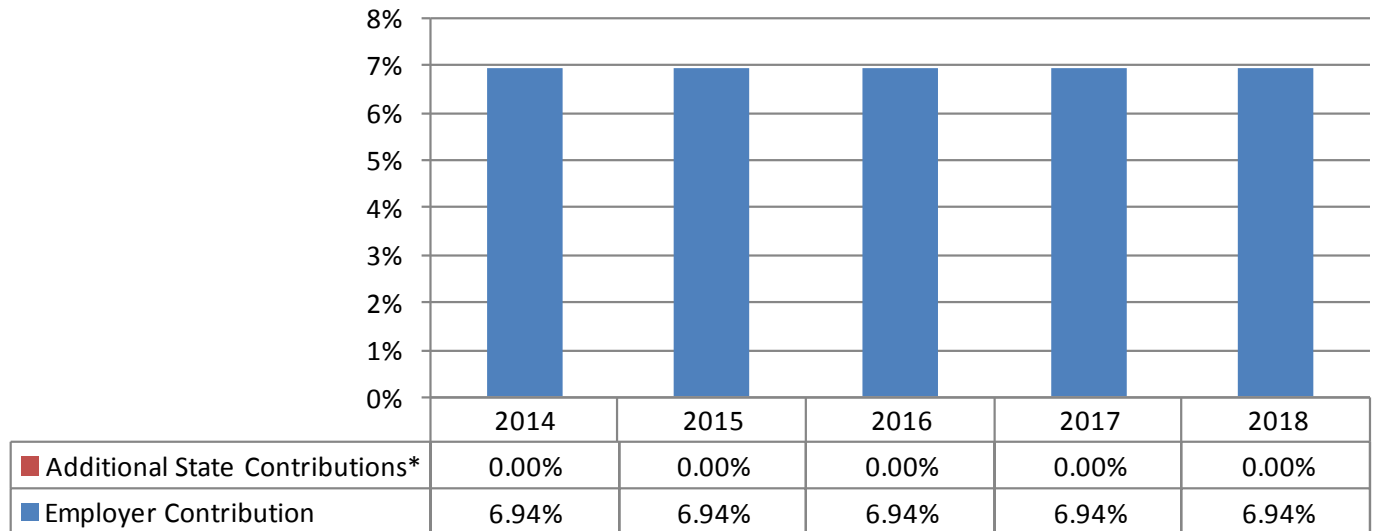


* Paid July 1 of the following year

Plan Year Beginning January1



Projected Contribution Rates - County

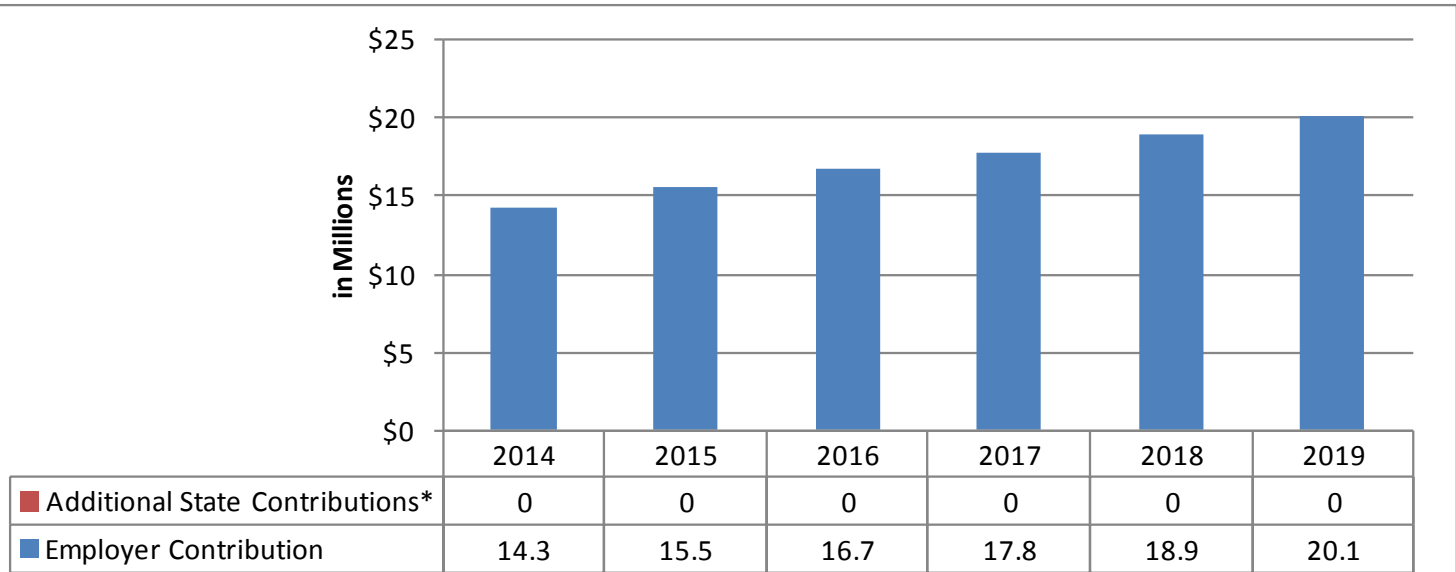


* Paid July 1 of the following year

Plan Year Beginning January 1



Projected Contribution Amounts - County



* Paid July 1 of the following year

Plan Year Beginning January 1

Comments and Conclusions

- Positive funding outlook for both plans
 - Significant deferred investment gains – will improve future funded status or offset investment losses
 - Actual contributions exceed ARC
 - Active member count expected to grow in future years
- Dividends
 - Board may grant dividend for County this year of up to 0.29% and remain 100% funded
 - If investment return for 2014 is at least 7.75%, both Plans are expected to be eligible for a dividend in 2015.

QUESTIONS?